

Asthma

In the School Setting

**Created by the
Arizona Asthma Coalition**

2007



Asthma is no big deal..... right?

WRONG !!

- Asthma can be life-threatening!
- Asthma affects academic performance!
- Schools CAN make a difference for kids with asthma!

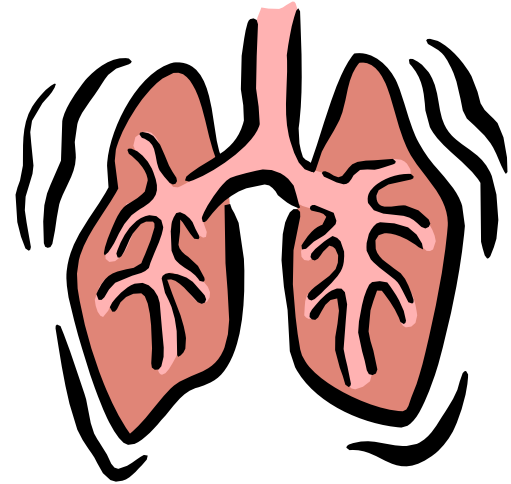


Asthma Perspective in Arizona

- Arizona has the second highest rate of asthma in the nation.
- Approximately eight percent (8%) of all school children have asthma.
- There were over 20,000 asthma related hospitalizations in 2001.
- Total hospitalization costs for 2001 was over \$45 million.



What is asthma?

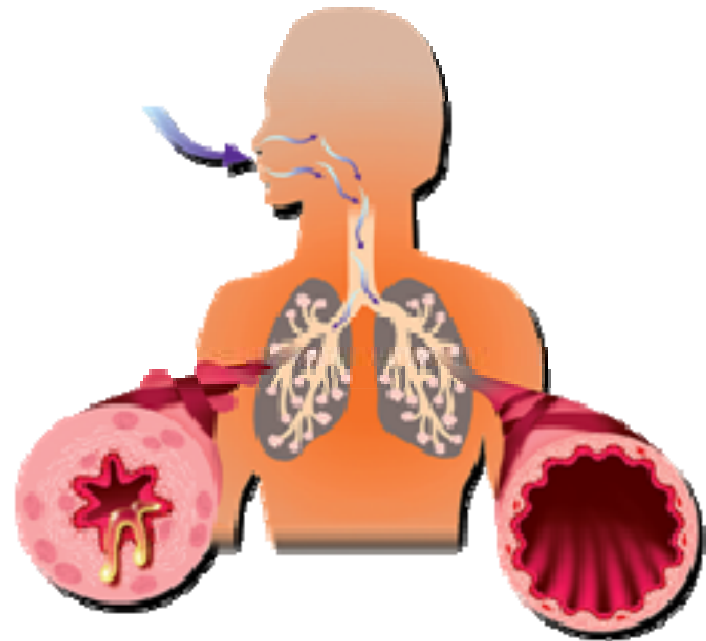


- Asthma is a chronic inflammatory disorder of the airways
- Asthma is the most common chronic disease of childhood
- Asthma can be life threatening and should be taken seriously



What happens during an asthma attack?

- airway is inflamed and swollen
- muscles tighten the airway
- cells make mucus



Source: www.aaai.org



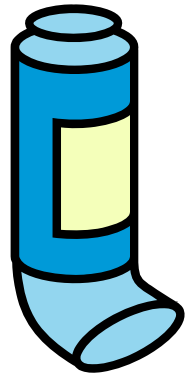
Asthma Symptoms

- Coughing
- Wheezing /whistling with breathing
- Shortness of breath
- Tired or fatigued
- Chest pain or tightness



What to do in case of an asthma episode?

- Stay Calm
- Keep the child calm
- Help the child focus on breathing
- Have the child sitting down and relaxed
- Administer quick relief medication
- Review the asthma action plan
- Ask for help, call parents, call 911 if needed.



Signs and Symptoms of Emergency

- Noisy breathing
- difficulty breathing while speaking or walking
- blue or gray color in the lips or fingers
- failure to improve with usual treatment
- **CALL 911, then call the parents**



Precipitating Factors/Triggers in the School Environment



American Academy of Allergy
Asthma and Immunology

Trigger Avoidance

Viral respiratory infections

Control the environment
Keep medication use at a minimum

- get an annual flu shot to protect yourself and others
- avoid contact with other children when sick
- children should stay home when sick
- wash hands often



Know Symptoms and Triggers for Symptoms

Allergens

Allergens are any substance that triggers allergies

- dust mites (found in classroom carpets)
- animal dander (from class pets or pet hair on students clothing)
- cockroach droppings (in classrooms where trash is not collected daily)
- pollen and molds



Courtesy of M. Waldvogel, NCSU



Trigger Avoidance

Allergens

Control the environment...

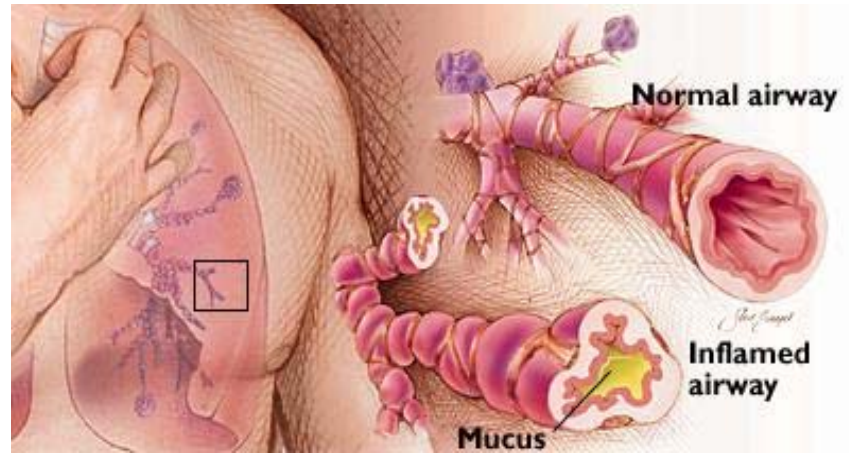
Keep medication use at a minimum

- keep classroom “allergen free”
- make sure classroom is clean
 - Dust with damp rag
 - Keep food tightly covered
 - Wash blankets if any, in hot water
 - Avoid stuffed toys
- identify sources of water leaks and repair them
- stay inside on windy days
 - Air Quality Flag Program
- use air conditioning



Know Symptoms and Triggers for Symptoms

Irritants



Irritants are substances that aggravate the nose and airways

- air pollutants (school bus exhaust and cars idling outside of schools)
- odors or sprays (perfume, scented lotions, antibacterial or scented sprays, classroom cleaning products)
- airborne particles, such as chalk dust
- second-hand smoke



Trigger Avoidance - Irritants

Control the environmentKeep medication use at a minimum

- promote a walking school bus
- choose unscented lotions
- avoid perfume, antibacterial or scented sprays, and classroom cleaning products when children with asthma are present
- airborne particles, such as chalk dust
- avoid second hand smoke exposure



Know Symptoms and Triggers for Symptoms

Food Additives

- Sulphites are used to preserve foods and beverages such as processed potatoes, shrimp, dried fruit.
- Sulfites can trigger an asthma episode in susceptible individuals.
- It is important for children not to share their lunch in order to avoid potential triggers.



Know Symptoms and Triggers for Symptoms

Emotional Stress

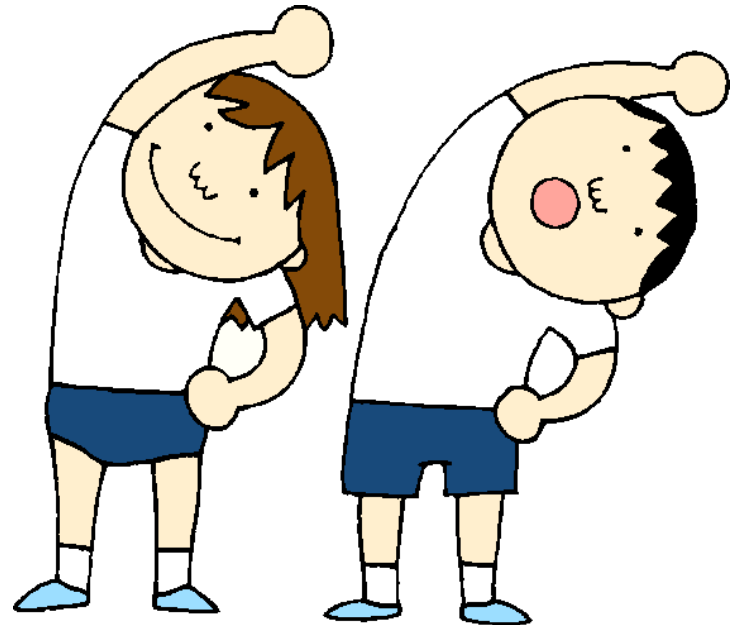
- Myth: asthma is an emotional disease
 - The physiological changes that accompany emotional responses (i.e., rapid breathing) may trigger asthma just like running
- Panic/ anxiety during an asthma attack can produce rapid breathing or hyperventilation, which can further worsen the exacerbation

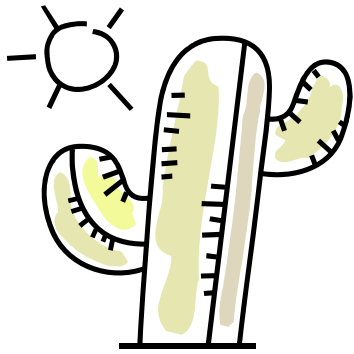


Know Symptoms and Triggers for Symptoms

Exercise

- All children need physical activity
- If children are wheezing during exercise, it is a sign of uncontrolled asthma and they need to increase maintenance medications (singulair, steroid inhaler, etc)
- Children with asthma need to warm up before exercise
- Triggers such as pollen, molds, and poor air quality need to be taken into consideration





Effects of Weather



Problems

Wind

- **Too much wind** can cause the blowing of dust and smoke to travel far
- **Not enough wind** can cause stagnant air, which can cause increased pollution in areas

Temperature

- **Too much temperature differences** between the outside and inside can be especially hard on sensitive lungs
- **Intense summer heat** can cause heating up of chemicals in air and create Ozone, which sunburns the lung lining.

- **Solutions**

- Receive the updated weather forecast from your local TV station
- Watch for the pollen update
- Receive pollution advisory notices from your local air quality division



Asthma Medication

There are two main types of medication for asthma

Quick-relief medication used to treat symptoms

Long term controller used daily to prevent symptoms



Quick-Relief Meds

Treat acute symptoms and exercise-induced bronchospasm

- Also known as reliever or rescuer
- Quick-relief medications provide prompt treatment of acute airflow obstruction
- Medications include short-acting inhaled medications like albuterol



Long Term Control

*Long-term-control asthma medications
Taken daily to control persistent asthma symptoms*

- **INHALED STEROIDS** are generally well tolerated and safe at recommended doses.
- Patients taking inhaled steroids should:
 - Use a spacer/holding chamber
 - Rinse and spit following inhalation



What to expect with Long-Term Controllers

- Asthma symptoms will diminish and patient will continue to improve
- Occurrence of severe attacks are greatly reduced
- Use of quick-relief medication decreases
- Lung function improves



Potential Side Effects

- **Quick Acting Inhaler**

- Jitteriness
- Hyperactivity
- Increased heart rate



- **Oral Steroids**

- Irritability
- Acting out
- Increased appetite
- Upset stomach



Asthma medication delivery tools



Spacers for use with inhalers

Small volume nebulizers with tubing

Peak flow meters



Asthma Medication Samples

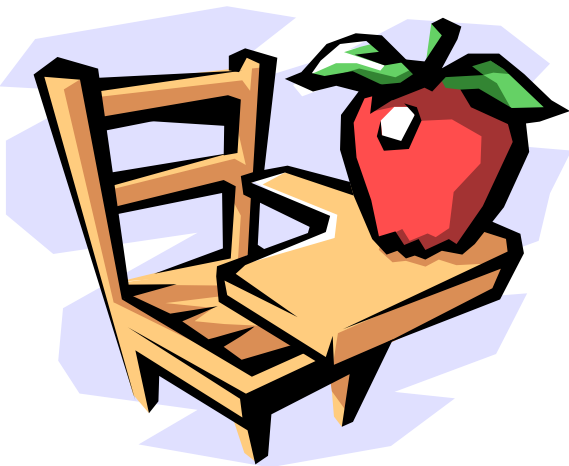


The Child With Asthma In School



- Have a current copy of the child's Asthma Action Plan on file. Go to www.azasthma.org for examples of asthma action plans you can use.
- Have a current list of the child's triggers
- Know how to contact the parents in an emergency

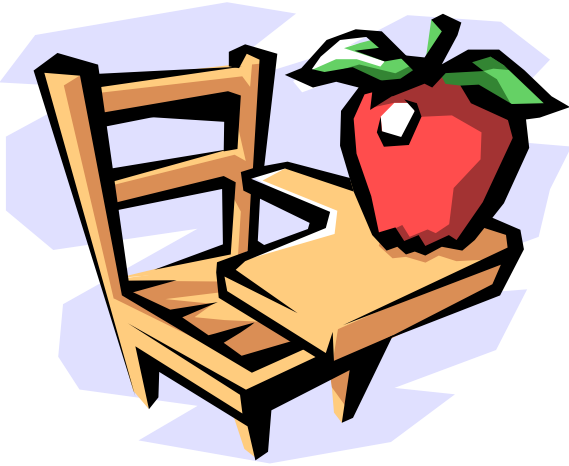




How Can Schools Help?

- **Asthma education for all school personnel**
- **Early intervention by school-based health care workers**
- **Controlling environmental allergens**
- **Every student with asthma should have an asthma action plan**
- **Providing school-based asthma education programs for students, parents and caregivers**





How Can You Help?

- Controlling classroom environmental allergens
- Making sure every student with asthma has an asthma action plan
- Partner with the school nurse and with parents

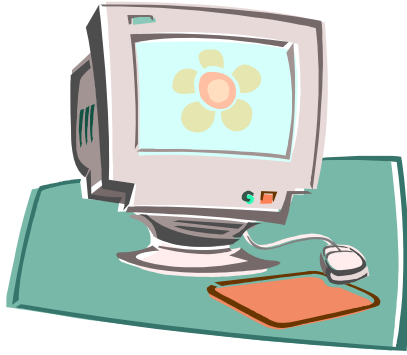


Partner With Parents

When a child has symptoms at school let the parents know:

- Type of symptoms
- How long did the symptoms last?
- What helped stop the symptoms?
- If this has happened before, how often does this happen?
- Remember... the more you can quantify the symptoms the easier it will be for the parents when they talk with the doctor





Community/Internet Resources

For more information
about asthma and to
find community
resources go to:

www.azasthma.org

www.lungarizona.org

www.aaaai.org

